UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,929	09/17/2003	Nischal Abrol	030142	6825

23696 7590 07/18/2007
QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER	
KARIKARI, KWASI	
ART UNIT	**PAPER NUMBER**
2617	

NOTIFICATION DATE	DELIVERY MODE
07/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
kascanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary	Application No.	Applicant(s)	
	10/665,929	ABROL ET AL.	
	Examiner	Art Unit	
	Kwasi Karikari	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-23 and 25-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-7,9-23 and 25-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1-*7,9-23 and 25-33* have been considered but are moot in view of the new ground(s) of rejection.

a. In the remarks, the applicant argues, in reference to claims 1 and 20, that Bertrand fails to disclose:

["a transmitter for sending a registration in response to the received connection identifier when the received connection identifier is not contained in the connection table"].

However, the Examiner disagrees with such assertion. Bertrand mentions that PPP register 126 will return the previously stored PPP context of mobile station 102 to PDSN; and the PPP session can be resumed without further creation of new PPP context (see col. 7, lines 1-19). Bertrand further discussed that a new PPP context is created if IMSI of the mobile station is not stored in the PPP register 126, database (see col. 6, lines 43-64; col. 7, line 63- col. 8, line 34 and Fig. 1 (PPP connection)). Thus, the absence of IMSI in the database prompt a new/complete PPP negotiation/connection to created for PPP session between mobile station 102, RN 108 and PDSN 120.

b. In the remarks, the applicant argues, in reference to claims 7 and 23, that Bertrand fails to disclose:

["a buffer for receiving data from the network that is designated for delivery to a wireless communication device, storing the received data until the wireless communication device is

located on one of the connections in the connection set and transmitting the stored data on the selected connection to the wireless communication device"].

However, the Examiner disagrees with such assertion. Bertrand mentions that PPP session (i.e., packet transmission between mobile station and PDSN via RN); radio link 112; R-P interface; storage/PPP register's database and transfer/handover of PPP session; and relaying of PPP session data between mobile stations 102 and PDSN 120 (see col. 1, line 65-67; col. 2, lines 49- col. 3, line 43).

c. In the remarks, the applicant argues, in reference to claims 16 and 26, that Bertrand fails to disclose:

[" wherein the received transmission includes the registration in response to the connection identifier when the connection identifier is not included in the connection table"].

However, the Examiner disagrees with such assertion. Bertrand mentions that PPP register 126 will return the previously stored PPP context of mobile station 102 to PDSN; and the PPP session can be resumed without further creation of new PPP context (see col. 7, lines 1-19). Bertrand further discussed that a new PPP context is created if IMSI of the mobile station is not stored in the PPP register 126, database; (see col. 6, lines 43-64; col. 7, line 63- col. 8, line 34 and Fig. 1 (PPP connection)). Thus, the absence of IMSI in the database prompt a new/complete PPP negotiation/connection to created for PPP session between mobile station 102, RN 108 and PDSN 120.

d. In the remarks, the applicant argues, in reference to claim 18, that Bertrand fails to disclose:

["a wireless communication device for receiving a connection identifier, storing the received connection identifier in a connection table, and transmitting a registration when the received connection is not contained in the connection table"].

However, the Examiner disagrees with such assertion. Bertrand mentions that a new PPP context is created if IMSI of the mobile station is not stored in the PPP register 126, database; (see col. 6, lines 43-64; col. 7, line 63- col. 8, line 34 and Fig. 1 (PPP connection)). Thus, the absence of IMSI in the database prompt a new/complete PPP negotiation/connection to created for PPP session between mobile station 102, RN 108 and PDSN 120. Bertrand also mentions that although the PPP registers 126 are shown as standalone nodes, the registers can be located anywhere in the system 100 and can be co-located with other part of system 100 (see col. 4, line 49- col. 5, line 38 and col. 5, line 59- col. 6, line 42).

e. In the remarks, the applicant argues, in reference to claims 28 and 31, that Bertrand fails to disclose:

["means for registering a connection in response to a received connection not contained in a connection table"].

However, the Examiner disagrees with such assertion. Bertrand mentions that a new PPP context is created if IMSI of the mobile station is not stored in the PPP register 126, database; (see col. 6, lines 43-64; col. 7, line 63- col. 8, line 34 and Fig. 1 (PPP

connection)). Thus, the absence of IMSI in the database prompt a new/complete PPP negotiation/connection to created for PPP session between mobile station 102, RN 108 and PDSN 120. Bertrand also mentions that although the PPP registers 126 are shown as standalone nodes, the registers can be located anywhere in the system 100 and can be co-located with other part of system 100 (see col. 4, line 49- col. 5, line 38; col. 5, line 59- col. 6, line 42; and col. 7, line 63- col. 8, line 34).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.
>
> The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-33 are rejected under U.S.C. 102(e) as being anticipated by Bertrand et al. (U.S 6,876,640), (hereinafter Bertrand).

Regarding **claims 1 and 20,** Bertrand discloses an apparatus (PDSN), comprising:

a connection table (= PPP register 126 could be any located any where in system 100, see col. 5, lines 50-67) for storing one or more connection identifiers (= registration information such as IMSI of mobile station 102, see col. 7, line 57- col. 8, line 23);

a receiver for receiving a connection identifier (= if PPP register 126 does not have the IMSI, the PDSN will be informed, see col. 6, lines 43-64; whereby the act of informing is being associated with the "receiving");

a processor (= inherent feature of PDSN) for delivering the received connection identifier to the connection table for storing when the received connection identifier is not contained in the connection table (= in response to IMSI unavailable message, the PPP context is added to the database of PPP register 126, see col. 8, lines 12-34); and

a transmitter for sending a registration in response to the received connection identifier when the received connection identifier is not contained in the connection table (= PPP register 126 will return the previously stored PPP context of mobile station 102 to PDSN; and the PPP session can be resumed without further creation of new PPP context, see col. 7, lines 1-19). Bertrand further discussed that a new PPP context is created if IMSI of the mobile station is not stored in the PPP register 126 (see col. 8, lines 12-34).

Regarding **claim 2,** as recited in claim 1, Bertrand discloses the apparatus wherein the connection identifier corresponds to a Packet Coordination Function (PCF) (see

col. 7, line 63- col. 8, line 11; whereby the RN 108 is being associated with the "PCF").

Regarding **claim 3,** as recited in claim 1, Bertrand discloses the apparatus further comprising a timer, wherein the processor removes a connection from the connection table in response to an expiration of the timer (see col. 7, lines 32-56).

Regarding **claim 4,** as recited in claim 3, Bertrand discloses the apparatus wherein, wherein the processor resets the timer in response to transmission by the transmitter on the connection associated therewith (= update the PPP register to prevent time out, see col. 6, lines 43-64).

Regarding **claim 5,** as recited in claim 3, Bertrand discloses the apparatus wherein, the processor clears the connection table when a connection is received corresponding to a Packet Data Serving Node (PDSN) that is different from a PDSN corresponding to a previously stored connection (see col. 7, lines 33-56).

Regarding **claim 6,** as recited in claim 3, Bertrand discloses the apparatus wherein, the processor clears the connection table when a clear table message is received by the receiver (see col. 8, line 60- col. 9, line 38).

Regarding **claims 7, 23, 29 and 32,** Bertrand discloses an apparatus/method, operable with a plurality of PCFs (RN 108) via a corresponding plurality of connections

(112), each PCF operable to communicate with one or more wireless communication devices (102), the apparatus further operable with a network (118) for directing data for transmission to one or more wireless communication devices (see Fig. 1), comprising:

a connection table for storing a plurality of connection sets (= PPP register 126 could be any located any where in system 100, see col. 5, lines 50-67 and col. 6, lines 10-20), each connection set comprising one or more connections associated with a wireless communication device (= R-P interface and PPP connection, see Fig. 1);

a processor (= inherent feature of RN 108) for selecting a connection from the one or more connections in a connection set associated with a wireless communication device for which data is directed from the network (= complete negotiation of PPP context of PPP session, see col. 1, lines 65-66 and col. 8, lines 12-59); and

a buffer for receiving data from the network that is designated for delivery to a wireless communication device, storing the received data until the wireless communication device is located on one of the connections in the connection set and transmitting the stored data on the selected connection to the wireless communication device (see col. 1, line 65-67; col. 2, lines 49- col. 3, line 43).

Regarding **claim 9,** as recited in claim 7, Bertrand discloses the apparatus, wherein an active connection identifier is stored in the connection table to identify zero or one active

connection for each wireless communication device (see col. 6, lines 43-64).

Regarding **claim 10,** as recited in claim 9, Bertrand discloses the apparatus, wherein the processor selects all of the connections associated with a wireless communication device for transmission to the wireless communication device when no connection for the wireless communication device is identified as active (= creation of new session, see col. 6, lines 43-64).

Regarding **claim 11,** as recited in claim 9, Bertrand discloses the apparatus, wherein the processor selects a subset of the connections associated with a wireless communication device for transmission to the wireless communication device when no connection for the wireless communication device is identified as active (see col. 6, lines 43-64).

Regarding **claim 12,** as recited in claim 9, Bertrand discloses the apparatus, wherein the processor selects the most recent active connection from the connections associated with a wireless communication device for transmission to the wireless communication device when no connection for the wireless communication device is identified as active (= previous PPP context are used, see col. 7, lines 1-19).

Regarding **claim 13,** as recited in claim 9, Bertrand discloses the apparatus, wherein the processor selects one or more connections randomly from the connections

associated with a wireless communication device for transmission to the wireless communication device when no connection for the wireless communication device is identified as active (see col. 7, line 57- col. 8, lines 34).

Regarding **claim 14,** as recited in claim 7, Bertrand discloses the apparatus, further comprising a plurality of timers corresponding to the plurality of stored connections, wherein the processor removes a connection from the connection table upon expiration of one of the plurality of timers associated with the connection (col. 7, lines 32-56).

Regarding **claim 15,** as recited in claim 14, Bertrand discloses the apparatus, wherein the processor resets one of the plurality of timers in response to an activity indicator associated with the mobile station on the corresponding connection (see col. 6, lines 43- 64).

Regarding **claims 16, 26, 30 and 33**, Bertrand an apparatus/method, operable with a PDSN and a plurality of wireless communication devices, comprising:

a connection identifier (connection between 102,108 and 120 and PPP connection for PPP session see col. 3, line 65- col. 4, line 48);

a receiver for receiving a transmission from a wireless communication device;

wherein the wireless communication device includes a connection table

(= message 202 is sent to RN 108; and PPP registers 126 are shown as standalone nodes, the registers can be located anywhere in the system 100 and can be co-located with other part of system 100 (see col. 4, line 49- col. 5, line 38; col. 5, line 59- col. 6, line 42 and col. 7, lines 63-67);

a processor (inherent) for establishing a connection with the PDSN associated with the wireless communication device in response to a received transmission containing a registration; wherein the received transmission includes the registration in response to the connection identifier when the connection identifier is not included in the connection table (= setting up PPP session between 102 and 120, see col. 7, line 63- col. 8, line 34; and col. 4, lines 26-35; col. 6, lines 43-64 8, line 34 and Fig. 1 (PPP connection)).

a first transmitter for sending an inactive message to the PDSN on the connection when a pre-determined time period has lapsed since a transmission is received from the mobile station (see col. 7, lines 32-56 and col. 5, lines 59-67).

Regarding **claims 17 and 27** , as recited in claims 16 and 26, Bertrand discloses that the apparatus, further comprising a second transmitter for transmitting a clear table message to the wireless communication device when the PDSN is different from a PDSN identified in a received transmission from the wireless communication device (see col. 8, line 60- col. 9, line 38).

Regarding **claim 18** wireless communication system, comprising:

a wireless communication device (102)for receiving a connection identifier (PPP session) storing the received connection identifier in a connection table, and transmitting a registration when the received connection is not contained in the connection table (col. 6, lines 10-23);

a Packet Coordination Function (PCF) (RN 108)for receiving a transmission from the wireless communication device and initiating a PDSN connection in response to a received transmission containing a registration (col. 7, line 57- col. 8, line 11); and

a Packet Data Serving Node (PDSN) (120) for establishing a PDSN connection with the PCF, associated with the wireless communication device (102), in response to a PDSN connection initiation, storing the connection in one of a plurality of connection (col. 8, lines 12-34) sets in a connection table, each connection set comprising one or more connections associated with a wireless communication device (col. 7, line 57- col. 8, line 34; and col. 5, lines 59-67).

Regarding **claim 19**, as recited in claim 18, Bertrand discloses the wireless communication system, wherein the PDSN further selects a connection from the one or more connections in a connection set associated with a wireless communication device for transmission of data directed to the wireless communication device (= PPP session, see col. 8, lines 12-34).

Regarding **claim 21,** as recited in claim 20, Bertrand discloses the method further comprising: removing a connection from the connection table in response to expiration of an associated timer (see col. 7, lines 32-56).

Regarding **claim 22,** as recited in claim 20, Bertrand discloses the method further comprising: receiving a clear table message; and clearing the connection table in response to the clear table message (see col. 8, line 60- col. 9, line 38).

Regarding **claim 25,** as recited in claim 23, Bertrand discloses the method further comprising maintaining a plurality of timers corresponding to the plurality of stored connections and removing a connection from the connection table upon expiration of one of the plurality of timers associated with the connection (col. 7, lines 32-56).

Regarding **claims 28 and 31,** Bertrand discloses an apparatus/processor, comprising:

means for receiving a connection identifier (= connection message sent, col. 7, lines 63-67);

means for storing the received connection identifier in a connection table when the connection is not contained in the connection table (see col. 7, line 63- col. 8, lines 34); and

means for registering a connection in response to a received connection not contained in the connection table (see col. 7, line 63- col. 8, line 34; and col. 5, lines 59-67).

Conclusion

3. **Examiner's Note**: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of 33the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwasi Karikari whose telephone number is 571-272-8566. The examiner can normally be reached on M-F (8 am - 4pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Rafael Pérez-Gutiérrez* can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8566. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kwasi Karikari
Patent Examiner.
07/09/2007

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER